

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

Claims 1-71 (canceled)

72. (New) A valve prosthesis device suitable for implantation in body ducts, the device comprising:

an annular support stent having a crimped configuration suitable for delivery through a body duct and an expanded configuration adapted for engagement with tissue at a target location, the support stent having a substantially circular profile in the expanded configuration, the support stent including an expandable frame and a plurality of longitudinally rigid support beams of fixed length; and

a valve assembly made of pliant material and having an inlet and an outlet, the valve assembly being anchored at least in part to the support beams,

whereby, when flow is allowed to pass through the valve prosthesis device from the inlet to the outlet, the valve assembly is kept in an open position, whereas a reverse flow is prevented as the collapsible slack portions of the valve assembly collapse inwardly providing blockage to the reverse flow.

73. (New) The device of claim 72, wherein the support beams are provided with bores for allowing stitching or tying the valve assembly to the support beams.

74. (New) The device of claim 73, wherein the bores extend substantially the entire length of the support beams.

75. (New) The device of claim 72, wherein the support stent includes three support beams and the valve assembly has a tricuspid configuration.

76. (New) The device of claim 72, wherein the valve assembly is made from bioprosthetic material.

77. (New) The device of claim 76, wherein the support stent is made from nickel titanium.

78. (New) The device of claim 72, further comprising at least one radiopaque marker on the support stent.

79. (New) The device of claim 78, wherein the at least one radiopaque marker on the support stent is made of a heavy metal material.

80. (New) The device of claim 72, wherein the support stent further includes a radially collapsible web between adjacent support beams, and wherein the valve assembly is anchored to both the support beams and web.

81. (New) The device of claim 72, wherein the valve assembly comprises separate leaflets and further including longitudinal bars separate from the support stent around which ends of each pair of adjacent leaflets roll and attach at the commissures.

82. (New) The device of claim 72, further including a fabric layer interposed between the valve assembly and support stent and to which both are stitched.

83. (New) A valve prosthesis device suitable for implantation in body ducts, the device comprising:

a support stent adapted to be initially crimped in a narrow configuration suitable for delivery through a body duct to a target location and adapted to be deployed to a larger diameter deployed state at the target location, the support stent being substantially tubular in its deployed state with a plurality of longitudinally rigid support beams of

fixed length distributed around a circumference thereof and extending substantially co-extensively with the support stent; and

a valve assembly made of pliant material and having an inlet and an outlet, the valve assembly including a plurality of commissures each of which attaches to a support beam for providing collapsible slack portions at the outlet;

whereby, when flow is allowed to pass through the valve prosthesis device from the inlet to the outlet, the valve assembly is kept in an open position, whereas a reverse flow is prevented as the collapsible slack portions of the valve assembly collapse inwardly providing blockage to the reverse flow.

84. (New) The device of claim 83, wherein the support stent has an inlet end and an outlet end and wherein the support beams terminate at the outlet end of the support stent.

85. (New) The device of claim 83, wherein the support beams are provided with bores for allowing stitching or tying the valve assembly to the support beams.

86. (New) The device of claim 85, wherein the bores extend substantially the entire length of the support beams.

87. (New) The device of claim 83, wherein the valve assembly is stitched to the support beams.

88. (New) The device of claim 83, wherein the support stent includes three support beams and the valve assembly has a tricuspid configuration.

89. (New) The device of claim 83, wherein the valve assembly is made from bioprosthetic material.

90. (New) The device of claim 89, wherein the support stent is made from nickel titanium.

91. (New) The device of claim 83, further comprising at least one radiopaque marker on the support stent.

92. (New) The device of claim 91, wherein the at least one radiopaque marker on the support stent is made of a heavy metal material.

93. (New) The device of claim 83, wherein the support stent further includes a radially collapsible web between adjacent support beams, and wherein the valve assembly is anchored to both the support beams and web.

94. (New) The device of claim 83, wherein the valve assembly comprises separate leaflets and further including longitudinal bars separate from the support stent around which ends of each pair of adjacent leaflets roll and attach at the commissures.

95. (New) The device of claim 83, further including a fabric layer interposed between the valve assembly and support stent and to which both are stitched.

96. (New) A valve prosthesis device suitable for implantation in body ducts, the device comprising:

an outer support stent adapted to be initially crimped in a narrow configuration suitable for delivery through a body duct to a target location and adapted to be deployed to a larger diameter deployed state at the target location, the support stent being substantially tubular in its deployed state;

an inner valve assembly made of pliant material and having an inlet and an outlet, wherein spaced commissure portions of the valve assembly are attached longitudinally to the support stent so as to provide therebetween collapsible slack portions at the outlet; and

a fabric layer interposed between the valve assembly and support stent and to which both are stitched,

whereby, when flow is allowed to pass through the valve prosthesis device from the inlet to the outlet, the valve assembly is kept in an open position, whereas a reverse flow is prevented as the collapsible slack portions of the valve assembly collapse inwardly providing blockage to the reverse flow.

97. (New) The device of claim 96, wherein the support stent has a plurality of longitudinally rigid support beams of fixed length to which the valve assembly commissures attach.

98. (New) The device of claim 96, wherein the support beams each has a series of bores formed therein, and wherein valve assembly is stitched to the bores of the support beams.

99. (New) The device of claim 98, wherein the bores extend substantially the entire length of the support beams.

100. (New) The device of claim 96, wherein the valve assembly has a tricuspid configuration with three commissures.

101. (New) The device of claim 96, wherein the valve assembly is made from bioprosthetic material.

102. (New) The device of claim 101, wherein the support stent is made from nickel titanium.

103. (New) The device of claim 96, further comprising at least one radiopaque marker on the support stent.

104. (New) The device of claim 103, wherein the at least one radiopaque marker on the support stent is made of a heavy metal material.

105. (New) The device of claim 96, wherein the support stent has a plurality of longitudinally rigid support beams of fixed length and a radially collapsible web between adjacent support beams, and wherein the valve assembly is anchored to both the support beams and web.

106. (New) The device of claim 96, wherein the valve assembly comprises separate leaflets and further including longitudinal bars separate from the support stent around which ends of each pair of adjacent leaflets roll and attach at the commissures.

107. (New) The device of claim 96, wherein a portion of the fabric layer forms a cuff that is wrapped around the support stent at an inlet thereof.